

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Mario Latronico	Examiner:	Sameh Tawfik
Application No.:	10/691,716	Art Unit:	3721
Filing Date:	October 22, 2003	Docket No.	58009-017200
Title:	PACKAGING MACHINE		
Customer No.	33717		

AMENDMENT AND RESPONSE TO OFFICE ACTION

MAIL STOP: AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Madam:

In response to the Final Office Action of April 24, 2006, please amend the above-identified application as follows:

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 6 of this paper.

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A horizontal packaging machine for making fluid-tight packages equipped with a zip closure, the machine comprising:

at least one unit for unwinding a film of synthetic material for packaging a series of products;

at least one unit for unreeling a pair of tapes to form the zip closure;

a shaping tunnel located downstream of the film unreeling unit;

a sealing unit located downstream of the shaping tunnel;

a power-driven film feed roller designed to apply a uniform pulling force on the film which is unwound and fed into the sealing unit, wherein the power-driven film feed roller is downstream of the sealing unit, wherein the location of the power-driven film feed roller and the uniform pulling force prevents the film from being uneven while sealed and wherein the power-driven film feed roller has on its surface a series of jaws for transversely sealing and separating the packages; and

a pair of opposite platforms, one on each side of the forward moving film and zip tapes, each platform being equipped with two jaws designed to make a first continuous seal along the outside of the joined edges of the film and a second seal along the inside in order to attach the zip tape to the film edges.

Claim 2 (canceled)

Claim 3 (previously presented): A machine according to claim 1, further comprising a cutting device, located upstream of the sealing unit and designed to cut the zip tape in order to obtain portions of film without zip tape on .

Claim 4 (previously presented): A machine according to claim 1, wherein the jaws have cutting edges.

Claim 5 (canceled)

Claim 6 (currently amended): A machine according to claim 51, further comprising free turning guide rollers for guiding the film into the sealing unit.

Claim 7 (currently amended): A machine according to claim 51, wherein one pair of jaws feature a longitudinal groove which accommodates the zip tape while the seal is being made.

Claim 8 (previously presented): A machine according to claim 1, further comprising, close to the at least one unit for unwinding the zip tape, a pair of unwinding rollers driven by a servomotor.

Claim 9 (previously presented): A machine according to claim 1, further comprising, downstream of the power-driven film feed roller, a device for collecting and feeding out the packages.

Claim 10 (previously presented): A machine according to claim 1, further comprising two process lines placed side by side.

Claim 11 (withdrawn): A horizontal packaging machine for making fluid-tight packages equipped with a zip closure, the machine comprising:

a first unreeling unit to unwind a film of synthetic material that is used for packaging a plurality of products, the film of synthetic material being fed into a shaping tunnel located downstream of the first unreeling unit;

a second unreeling unit to unwind a zip tape, the zip tape being fed into the shaping tunnel in order to seal the zip tape to the film;

an upper platform located on the top side of the film of synthetic material and zip tape, the upper platform having an upper set of jaws,

a lower platform located on the bottom side of the film of synthetic material and zip tape, the bottom platform having a bottom set of jaws, wherein the bottom set of jaws are pressed against the upper set of jaws so as to make a first continuous longitudinal seal along the outside of the joined edges of the film and a second longitudinal seal along the inside in order to attach the zip tape to the film edges; and

a power-driven film feed roller designed to apply a uniform pulling force on the film; the power-driven film feed roller having on its outer surface sealing and cutting jaws that transversally seal and separate the packages, the sealing jaws being spaced at equal angular intervals.

Claim 12 (withdrawn): A method for to make fluid-tight packages equipped with a zip closure, comprising:

feeding a film of synthetic material mounted on a first unreeling unit into a shaping tunnel located downstream of the first unreeling unit;

feeding a zip tape mounted on a second unreeling unit into the into the shaping tunnel in order to seal the zip tape to the film;

making a first continuous longitudinal seal along the outside of the joined edges of the film by compressing pair of opposing jaws against each other while the film is in between the jaws;

making a second longitudinal seal along the inside in order to attach the zip tape to the film edges, the second longitudinal seal being made by compressing the pair of opposing jaws against each other while the film and the zip tape are in between the jaws;

pulling the film so as to create a uniform pulling force, the film being pulled by a power-driven film feed roller that has on its outer surface sealing and cutting jaws spaced at equal angular intervals;

transversally sealing the film between the packages; and

transversally separating the packages by transversally cutting the sealed film between the packages.

Claim 13 (currently amended): A horizontal packaging machine for making fluid-tight packages equipped with a zip closure, the machine comprising:

at least one unit for unwinding a film of synthetic material for packaging a series of products;

at least one unit for unreeling a pair of tapes to form the zip closure;

a shaping tunnel located downstream of the film unreeling unit;

a sealing unit located downstream of the shaping tunnel wherein the sealing unit includes free turning guide rollers for guiding the film into the sealing unit; ~~and~~

a power-driven film feed roller designed to apply a uniform pulling force on the film which is unwound and fed into the sealing unit, wherein the power-driven film feed roller is downstream of the sealing unit, and wherein the power-driven film feed roller has on its surface a series of jaws for transversely sealing and separating the packages; and

a pair of opposite platforms, one on each side of the forward moving film and zip tapes, each platform being equipped with two jaws designed to make a first continuous seal along the outside of the joined edges of the film and a second seal along the inside in order to attach the zip tape to the film edges.

REMARKS

The office action issued by the Examiner and the citations referred to in the office action have been carefully considered.

Claims 1, 3-4, 6-10, and 13 are pending. Claims 2 and 5 have been canceled. Claims 1 and 13 have been amended to include the limitations of Claim 5. Claims 6 and 7 have been amended to correct the dependency.

Claim Rejections - 35 U.S.C. § 103

The Examiner has rejected Claims 1, 3-10, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Runge (U.S. Patent No. 5,247,781) in view of Grevich et al (U.S. Patent No. 4,305,240).

As already detailed in the previous responses, according to the present claims, in order to simplify the apparatus and avoid failures such as crumpling of the film and tapes and achieve a high packaging output, the claims propose, among other differentiating features, that downstream of the sealing units there is provided “a power-driven film feed roller designed to apply a uniform pulling force on the film which is unwound and fed into the sealing unit.”

According to the present claims it is not only important to have a uniform pulling force, but also to add means for guiding the film 13 into the sealing unit 20. At the ends of each platform 25, there are free-turning rollers 30 for guiding the film 13 into the sealing unit 20 which is located upstream of the feed roller 21.

Moreover, according to the claims, there is a device 19 for cutting the zip tape 15. This device 19 is located upstream of the sealing unit 20 and performs two important functions: one function is to cut the zip tape and the second function is to obtain portions 34 of film 13 without zip tape, in order to separate one package from the next.

As a matter of fact, Runge does not disclose both the features of the free-turning rollers and device 19 which cuts the zip tape 15 in order to obtain portions 34 of film 13 without zip tape on them separating one package 11 from the next.

Grevich does not describe the free-turning rollers and the cutting device as in the present invention. In this prior art device, there is only a rotor 17 having a multiplicity of sealing and cutoff heads 18.

The focal point of the rejection of the Examiner is whether or not Grevich et al. (US 4,305,240) explicitly or obviously discloses the feature relating to applying a uniform pulling force on the film which is unwound and fed into the sealing unit.

According to the Examiner, as there is no means for feeding film 12 between the wrapper 11 and the rotor 17, this should make it clear and obvious that it is the rotor 17 which feeds and pulls the film.

Grevich states (col. 4, lines 10-13) that the package forming and sealing machine is indicated in general by numeral 10 and is to be used in conjunction with a wrapper 11 of a type known to persons of skill in the art, and of the type which receives a strip of heat sealable film 12 and also receives a succession of articles 13. According to Grevich the wrapper is of the known type and is therefore not further described. The wrapper 11 receives a series of articles 13, see fig. 4, that are located and moved to the wrapper by means of an endless belt (without reference sign in Fig. 4, at far left).

Then the articles are moved into the wrapper where they receive the film 12. The wrapper 11 is not further described, being of the known type, but it is clear that some source of motion is given in the wrapper to the articles 13, otherwise they would stop moving through the wrapper. In other words the articles 13 are not moved and fed by the rotor 17 through the film 12, but by an independent source of motion of the wrapper not further described. Then they receive the heat sealable film 12 in the wrapper 11 and the film 12 is formed in the tubular wrapper 14 which embraces and confines the series of articles 13 and maintains the articles in spaced relation with each other (see column 4, lines 10-19).

According to the description of the wrapper of Grevich, the film 12 is driven and fed by the source of motion (not further described) in the wrapper 11 and not therefore by the rotor 17. The Examiner maintains that it is the rotor 17 that pulls with the film, but does not consider the

issue of the movement of the articles 13 in the wrapper 11: such articles 13 are moved independently of the film and are by no means moved by the film 12 which, in the opinion of the examine is pulled by the rotor 17.

Thus it is not possible to understand the Grevich disclosure in the sense that it is the rotor 17 that pulls the film 12 which, in turn, draws the articles 13. So there must be a source of motion, for example motor 22, for moving the articles and the film 12 in the wrapper 11. This is the only possible interpretation of Grevich. This interpretation is strengthened by the passage, already cited in the previous instructions, col. 5, lines 21-29, "The main shaft 17 receives rotary motion from the wrapper 11 so as to coordinate the rotational speed of the rotor with the rate of travel of the article-containing sheet material wrapper 14 being received by the rotor. More specifically, a source of rotary motion or motor 22 is connected with a variable speed drive 22.1 by a chain 22.2, and the variable speed drive 22.1 is connected to a sprocket 23 affixed on the main rotor shaft 17.1 by a chain 23.1." The fact that the rotational speed of the rotor 17 is coordinated with the rate of travel of the articles 13 necessarily requires that the articles 13 and therefore the film applied to the articles 13 in the tubular wrapper 14 are moved by a source of motion independent from the source of motion moving the rotor 17, so that it can not be concluded that it is the rotor 17 that pulls the film 12 and the articles 13.

Moreover, according to the present claims, it is important that the pulling force on the film be uniform, in order not to stress the packages too much and cause failures of the packaging machine. The pulling force is uniform and does not vary during the time.

There is no indication in Grevich that, even if it would be established that the rotor 17 pulls the film 12, this pulling force would be uniform, i.e. constant, invariable. The fact that the motion to the rotor 17 is given by the variable speed drive 22.1 means that the rotational speed of the rotor 17 may vary, so that it would be impossible to have a uniform rotational speed and thus a uniform (pulling) force.

However, should the Examiner maintain the decision about the rotor 17 Grevich applying uniform pulling force to the film 12, other limitations of the claims considered important and indicate a patentable distinction over the prior art.

For instance, the amended claims include the limitation of a pair of opposite platforms (25) one on each side of the forward moving film (13) and zip tapes (15), each platform being equipped with two jaws (26, 27) designed to make a first continuous seal (28) along the outside of the joined edges of the film (13) and a second seal (29) along the inside in order to attach the zip tape (15) to the film edges. This features helps that the package with zip closure be reliably obtained.

The Examiner is of the opinion that this limitation is obvious in view of Runge and US 6,532,325 or US 4,618,383, because “two seals on a reclosable bag is old, well known and available in the art.” However, the Examiner fails to show that the cited documents each disclose or suggest the introduction of the pair of opposite platforms one on each side of the forward moving film and zip tapes, each platform being equipped with two jaws and only focuses on the effect of obtaining a first continuous seal (28) along the outside of the joined edges of the film (13) and a second seal (29) along the inside in order to attach the zip tape. The constructional difference between the horizontal packaging machine of the present invention and the combination of Runge with US 6,532,325 or US 4,618,383 is evident.

Neither US 6,532,325 nor US 4,618,383 are able to show a pair of opposite platforms one on each side of the forward moving film and zip tapes, each platform being equipped with two jaws designed to make a first continuous seal along the outside of the joined edges of the film and a second seal along the inside in order to attach the zip tape to the film edges.

US 6,532,325 deals with an apparatus for making releasable packages and reclosable seals, which discloses a packaging film material 32 and a thermoformable strip 31 secured to the film 32 continuously along the strip trailing edge 39 by heat seals 40, along the strip ends 41 as at 42. The leading edge 44 is secured against the packaging film as the composite web passes

into the space between the feed horn 22 and forming collar 23 to prevent tearing off the strip from the film.

According to Fig. 9 the thermoformable strip 31 is positioned between the reclosable seal forming horizontally reciprocable heated female die 58 and the two part heated male die 57. The female die 58 is provided with a forming recess 68, and the male die is provided with a forming wedge 69. The composite dies 60 and 61 consist of a pair of dies 64 which form the top seal 35 of the package 34 being completed, and a pair of dies 65 which form the bottom seal 37 of the next package to descend.

No indication in this document can be found about anything corresponding to the two platforms 25 of the present invention.

Thus, the disclosure of US 6,532,325 differentiates itself from the horizontal packaging machine of the present claims and is not able to lead to an obvious combination of features starting with the disclosure of Runge as objected by the Examiner.

As for the US 4,618,383, this deals with a the manufacture of plastic bags having interlocking profiled extrusions for the closure. The extruded plastic profiles are applied to a moving web of film immediately after extrusion of the profiles. The profiles are fused to the web on a first section of a fusing/cooling arcuate plate-like support member.

Referring to Figs. 1 to 4, a plastic bag 10 is formed from a thin, plastic film which is folded at the bottom 11 and is heat sealed along the sides 12 to form a pouch. Locking profiles 13 and 14 along the inside of the top of the bag form a reclosable closure.

Each of the locking profiles includes locking protrusions, such as 15, 16, 17, and 18. These hook-shaped protrusions mate to lock the closure when they are pressed together. The protrusions are flexible so that the locking closure can be easily separated and then reclosed. No indication can be found also in the US 4,618,383 about the constructional features of the present invention detailed above.

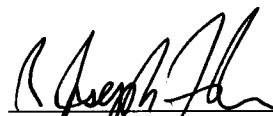
Thus, the US 4,618,383 also fails to disclose the features dealing with the platforms 25 of the present invention and therefore is not able to lead to an obvious combination together with the disclosure of Runge.

In conclusion, according to the above arguments, the combination of the disclosure of Runge with Grevich and Runge with either US 6,532,325 or US 4,618,383 does not lead to the subject matter of the newly amended claims.

Applicants have complied with all requirements made in the above-referenced communication. Applicants submit that the present application is in condition for allowance, and therefore, respectfully request that a timely Notice of Allowance be issued in this case. Should matters remain, which the Examiner believes could be resolved in a telephone interview, the Examiner is requested to telephone the Applicants' undersigned agent.

The Director is authorized to charge any additional fee(s) or any underpayment of fee(s), or to credit any overpayments to Deposit Account Number **50-2638**. Please ensure that Attorney Docket Number 58009-017200 is referred to when charging any payments or credits for this case.

Respectfully submitted,



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